

CLAIMS

1. A method for sticking a tape having a sticky surface to a surface of an adherend, comprising:

5 preparing the tape for sticking to the adherend;

attaching the tape via a non-sticky surface to a support film having a sticky and removable surface via the surface;

10 while subjecting the support film to tension, causing the sticky surface of the tape on the support film to be opposed to a surface of the adherend mounted on a mounting table;

sticking the tape to the adherend by pressing the support film; and

releasing the support film from the tape.

15 2. The method for sticking a tape according to claim 1, which comprises attaching a plurality of the tapes to the long support film along a longer direction, and transferring the support film whereby the tapes are stuck to respective adherends by repetition of operations (i) to (iv):

20 (i) causing the sticky surface of the tape on the support film to be opposed to a surface of the adherend mounted on the mounting table;

(ii) sticking the tape to the adherend by pressing the support film;

- (iii) releasing the support film from the tape; and
- (iv) mounting a new adherend on the mounting table.

3. The method for sticking a tape according to claim
5 1 or 2, which involves a frame member for fixing the support
film and comprises:

attaching and fixing the support film to the frame member
such that the tape is included in a frame of the frame member;

causing the sticky surface of the tape in the frame of
10 the frame member to be opposed to a surface of the adherend
mounted on the mounting table; and

sticking the tape to the adherend by pressing the support
film in the frame of the frame member.

15 4. The method for sticking a tape according to claim
3, which comprises relatively moving the frame member to which
the support film is attached and the mounting table on which
the adherend is mounted to perform alignment of the tape in
the frame of the frame member with the adherend.

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5. The method for sticking a tape according to claim
3 or 4, which involves:

a fixing roll for attaching and fixing the support film
to the frame member;

an sticking roll for sticking the tape to the adherend;
a wind-up roll for the support film; and
a fixed end of the support film;
and comprises:

5 moving the fixing roll toward the frame member while
causing the fixing roll to press the support film between the
wind-up roll and the fixed end, thereby transferring the tape
attached to the support film between the wind-up roll and the
fixing roll in a direction opposite to the wind-up direction
10 such that the tape is included in the frame of the frame member;

causing the fixing roll to press the support film to fix
the support film to the frame member;

causing the application roll to press the support film
in the frame of the frame member to stick the tape to the
15 adherend; and

moving the fixing roll away from the frame member
simultaneously with releasing the support film from the tape
and winding up the support film on the wind-up roll.

20 6. The method for sticking a tape according to claim
3 or 4, which involves:

a fixing roll for attaching and fixing the support film
to the frame member;

an sticking roll for sticking the tape to the adherend;

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and

a clamping member for clamping the support film across the width;

and comprises:

5 clamping the support film at longer edge portions thereof with the clamping member and arranging the tape such that the tape is included in the frame of the frame member;

causing the fixing roll to press the support film to fix the support film to the frame member;

10 causing the sticking roll to press the support film in the frame of the frame member to stick the tape to the adherend; and

releasing the support film from the tape by relatively moving the clamping member.

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7. The method for sticking a tape according to any one of claims 1 to 6, wherein the adherend is a semiconductor wafer and the tape is a protective tape.

20 8. An apparatus for sticking a tape having a sticky surface to a surface of an adherend, which apparatus comprises:

a mounting table on which the adherend is mounted;

a frame member provided to include an adherend-mounting surface of the mounting table;

a fixing roll for attaching and fixing a long support film to the frame member, the support film having a sticky and removable surface to which the tape is attached; and

an sticking roll for sticking the tape to the adherend;

5 the apparatus being constructed such that:

the support film is arranged above the frame member so that the tape is included in a frame of the frame member;

the fixing roll is caused to press the support film to fix the support film to the frame member;

10 the sticking roll is caused to press the support film in the frame of the frame member to stick the tape to the adherend; and

the support film is released from the tape.

15 9. The apparatus for sticking a tape according to claim 8, which further comprises:

a wind-up roll for the support film; and

a fixed end of the support film;

the apparatus being constructed such that:

20 the fixing roll is moved toward the frame member while pressing the support film between the wind-up roll and the fixed end, thereby transferring the tape attached to the support film between the wind-up roll and the fixing roll in a direction opposite to the wind-up direction such that the tape is included

in the frame of the frame member;

the fixing roll is caused to press the support film to fix the support film to the frame member;

the sticking roll is caused to press the support film
5 in the frame of the frame member to stick the tape to the adherend; and

the fixing roll is moved away from the frame member and simultaneously the support film is released from the tape and is wound on the wind-up roll.

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10. The apparatus for sticking a tape according to claim 8, which further comprises a clamping member for clamping the support film across the width, the apparatus being constructed such that:

15 the support film is clamped at longer edge portions thereof with the clamping member and the tape is arranged such that the tape is included in the frame of the frame member;

the fixing roll is caused to press the support film to fix the support film to the frame member;

20 the sticking roll is caused to press the support film in the frame of the frame member to stick the tape to the adherend; and

the support film is released from the tape by relatively moving the clamping member.

11. The apparatus for sticking a tape according to any one of claims 8 to 11, which further comprises aligning means capable of relatively moving the frame member to which the support film is attached and the mounting table on which the adherend is mounted to perform alignment of the tape in the frame of the frame member with the adherend.

12. An apparatus for sticking a tape having a sticky surface to a surface of an adherend, which apparatus comprises:

a mounting table on which the adherend is mounted;

a press roll for pressing a long support film having a sticky and removable surface to which the tape is attached, to stick the tape to the adherend; and

a clamping member for clamping the support film across the width;

the apparatus being constructed such that:

the support film is clamped at longer edge portions thereof with the clamping member and the clamping member is moved to cause the sticky surface of the tape on the support film to be opposed to a surface of the adherend mounted on the mounting table;

the press roll is caused to press the support film to stick the tape to the adherend; and

the support film is released from the tape by relatively moving the clamping member.

13. The apparatus for sticking a tape according to any
5 one of claims 8 to 12, wherein the adherend is a semiconductor wafer and the tape is a protective tape.